Objectives:

- Students will memorize the multiplication table, as evidenced by them passing "minute quizzes."
- Students will simplify fractions, as evidenced by them completing a warm-up worksheet where they do so.
- Students will multiply fractions (including whole numbers and mixed numbers) as evidenced by them completing a homework assignment where they do so.
- Students will divide fractions (including whole numbers and mixed numbers) as evidenced by them completing a homework assignment where they do so.

Student Materials on Desk Corner:

- Homework #2-28
- Homework Checker
- Readiness Checker

Student Materials for Class:

- Homework Log
- Binder Paper
- Pencils

Teacher Materials:

- "Warm-up 2-29" for each student
- "Minute Quiz 2-29" for each student
- "Homework #2-28" answer key and grading roster for TA
- "Homework #2-29" handout for each student

Homework:

- Finish Homework #2-29
- ALEKS

Time	Activity
10 min	**MINUTE QUIZ, WARM-UP, HOMEWORK COLLECTION, AND ATTENDANCE** **Minute Quiz and Warm-up** When the bell rings, quickly go around and put the **minute quiz** on each student's desk, facedown. Then, start everyone on the quiz at the same time and give everyone one minute. While students are working on the quiz, pass out the **warm-ups** so that students can work on them once they're done with the minute quiz. Also, stamp the **readiness checkers** of students who were ready when the bell rang and had their readiness checkers out. **Homework Collection and Attendance** Instruct the TA go around and collect **homework** and stamp **homework checkers**. Give the TA the answer key and have him or her grade the homework that was collected. During this time, take **attendance**. **Warm-up & Notes Checker** Once all the homework is collected, go around and stamp the students' "Warm-up and Notes Checkers."
30 min	**LESSON: MULTIPLYING AND DIVIDING FRACTIONS** **Notes** Follow the handwritten Cornell Notes. Once students are finished, go around and stamp the students' "Warm-up and Notes Checkers."
20 min	**CLASSWORK** Pass out the **homework/classwork** handout and have students write down the assignment on their homework logs. Have the TA pass out **fraction circles** and write own which student has which set of fraction circles. Students should use the fraction circles to complete Homework #2-26, which will serve as the classwork.
20 min	**ALEKS** When students finish their classwork, they should continue with **ALEKS**. Use this student work time to **return graded homework**.

Numeracy
Minute Quiz 2-29 A

Name:
Date: Period:

Solve the following multiplication problems. You have exactly one minute!

11 • 12 =	3 • 12 =	10 • 6 =
6 • 7 =	6 • 5 =	10 • 4 =
12 • 6 =	12 • 7 =	4 • 6 =
6 • 1 =	1 • 3 =	5 • 10 =

Numeracy
Minute Quiz 2-29 A

Name:
Date: Period:

Solve the following multiplication problems. You have exactly one minute!

11 • 12 =	3 • 12 =	10 • 6 =
6 • 7 =	6 • 5 =	10 • 4 =
12 • 6 =	12 • 7 =	4 • 6 =
6 • 1 =	1 • 3 =	5 • 10 =

Numeracy
Minute Quiz 2-29 A

Name:
Date: Period:

Solve the following multiplication problems. You have exactly one minute!

11 • 12 =	3 • 12 =	10 • 6 =
6 • 7 =	6 • 5 =	10 • 4 =
12 • 6 =	12 • 7 =	4 • 6 =
6 • 1 =	1 • 3 =	5 • 10 =

Numeracy
Minute Quiz 2-29 B

Name:
Date: Period:

Solve the following multiplication problems. You have exactly one minute!

5 • 8 =	8 • 11 =	9 • 4 =
4 • 5 =	8 • 2 =	10 • 3 =
2 • 8 =	6 • 8 =	7 • 10 =
9 • 10 =	4 • 10 =	7 • 5 =

Numeracy
Minute Quiz 2-29 B

Name:
Date: Period:

Solve the following multiplication problems. You have exactly one minute!

5 • 8 =	8 • 11 =	9 • 4 =
4 • 5 =	8 • 2 =	10 • 3 =
2 • 8 =	6 • 8 =	7 • 10 =
9 • 10 =	4 • 10 =	7 • 5 =

Numeracy
Minute Quiz 2-29 B

Name:
Date: Period:

Solve the following multiplication problems. You have exactly one minute!

5 • 8 =	8 • 11 =	9 • 4 =
4 • 5 =	8 • 2 =	10 • 3 =
2 • 8 =	6 • 8 =	7 • 10 =
9 • 10 =	4 • 10 =	7 • 5 =

Numeracy
Minute Quiz 2-29 C

Name:
Date: Period:

Solve the following multiplication problems. You have exactly one minute!

10 • 7 =	8 • 12 =	2 • 8 =
1 • 2 =	11 • 10 =	9 • 2 =
1 • 8 =	1 • 8 =	10 • 8 =
7 • 7 =	1 • 2 =	7 • 11 =

Numeracy
Minute Quiz 2-29 C

Name:
Date: Period:

Solve the following multiplication problems. You have exactly one minute!

10 • 7 =	8 • 12 =	2 • 8 =
1 • 2 =	11 • 10 =	9 • 2 =
1 • 8 =	1 • 8 =	10 • 8 =
7 • 7 =	1 • 2 =	7 • 11 =

Numeracy
Minute Quiz 2-29 C

Name:
Date: Period:

Solve the following multiplication problems. You have exactly one minute!

10 • 7 =	8 • 12 =	2 • 8 =
1 • 2 =	11 • 10 =	9 • 2 =
1 • 8 =	1 • 8 =	10 • 8 =
7 • 7 =	1 • 2 =	7 • 11 =

Numeracy
Warm-up 2-29

Name:
Date: Period:

Simplify the following fractions using prime factorization and canceling terms.

1) $\frac{8}{12}$

2) $\frac{10}{15}$

3) $\frac{9}{12}$

4) $\frac{14}{28}$

5) $\frac{24}{36}$

6) $\frac{32}{40}$

Numeracy
Warm-up 2-29

Name:
Date: Period:

Simplify the following fractions using prime factorization and canceling terms.

1) $\frac{8}{12}$

2) $\frac{10}{15}$

3) $\frac{9}{12}$

4) $\frac{14}{28}$

5) $\frac{24}{36}$

6) $\frac{32}{40}$

Tom Wong
1/4/09

Multiplying and Dividing Fractions

Section → Multiplying Fractions

To multiply two fractions,

Step 1: Write the product of the numerators over the product of the denominators.

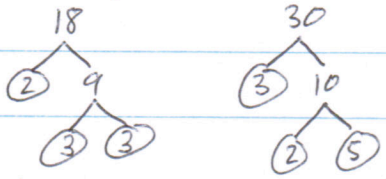
Step 2: Simplify.

Ex: $\frac{2}{3} \cdot \frac{9}{10} = ?$

Step 1:

$$\frac{2}{3} \cdot \frac{9}{10} = \frac{2 \cdot 9}{3 \cdot 10} = \frac{18}{30}$$

Step 2: Simplify



$18 = 2 \cdot 3 \cdot 3$ $\quad$ $30 = 2 \cdot 3 \cdot 5$

$$\frac{18}{30} = \frac{2 \cdot 3 \cdot 3}{2 \cdot 3 \cdot 5} = \boxed{\frac{3}{5}}$$

Ex: $2\frac{1}{4} \cdot 8 = ?$

↳ $\frac{8}{1}$

↳ $\frac{2 \cdot 4 + 1}{4} = \frac{8+1}{4} = \frac{9}{4}$

$\frac{9}{4} \cdot \frac{8}{1} = ?$

Step 1: $\frac{9}{4} \cdot \frac{8}{1} = \frac{9 \cdot 8}{4 \cdot 1} = \frac{72}{4}$

Step 2: Simplify

$$4\overline{)72} \Rightarrow \frac{72}{4} = \boxed{18}$$

$-4\downarrow$

32

-32

Section → Dividing Fractions

To divide fractions,

Step 1: Multiply the first fraction by the reciprocal of the second fraction.

Step 2: Simplify

Ex: $\frac{3}{4} \div 1\frac{1}{2} = ?$

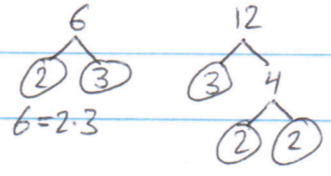
↳ $1\frac{1}{2} = \frac{1 \cdot 2 + 1}{2} = \frac{2+1}{2} = \frac{3}{2}$

$\frac{3}{4} \div \frac{3}{2} = ?$

Step 1: $\frac{3}{4} \div \frac{3}{2} = \frac{3}{4} \cdot \frac{2}{3} = \frac{3 \cdot 2}{4 \cdot 3} = \frac{6}{12}$

reciprocal

Step 2: Simplify



$\frac{6}{12} = \frac{2 \cdot 3}{2 \cdot 2 \cdot 3} = \boxed{\frac{1}{2}}$

Numeracy Name:
Homework #2-29 – Multiplying & Dividing Fractions Date: Period:

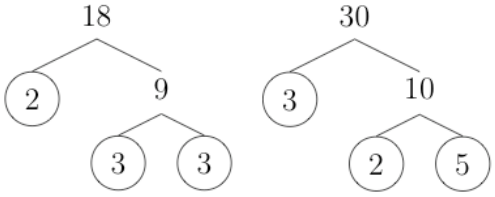
Multiply the following fractions by writing the product of the numerators over the product of the denominators. Make sure you simplify your answer.

Ex.) $\frac{2}{3} \cdot \frac{9}{10}$

Step 1: Write the product of the numerators over the product of the denominators.

$$\frac{2}{3} \cdot \frac{9}{10} = \frac{2 \cdot 9}{3 \cdot 10} = \frac{18}{30}$$

Step 2: Simplify.



$18 = 2 \cdot 3 \cdot 3$ $30 = 2 \cdot 3 \cdot 5$

$$\frac{18}{30} = \frac{2 \cdot 3 \cdot 3}{2 \cdot 3 \cdot 5} = \boxed{\frac{3}{5}}$$

1) $3 \cdot \frac{4}{9}$

2) $4\frac{1}{2} \cdot \frac{5}{6}$

3) $5 \cdot \frac{7}{10}$

more on back

Divide the following fractions by multiplying the first fraction by the reciprocal of the second fraction. Make sure you simplify your answer.

Ex.) $\frac{3}{4} \div 1\frac{1}{2}$

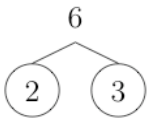
$\hookrightarrow 1\frac{1}{2} = \frac{1 \cdot 2 + 1}{2} = \frac{2+1}{2} = \frac{3}{2}$

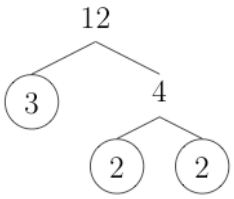
Step 1: Multiply the first fraction by the reciprocal of the second fraction.

$$\frac{3}{4} \div \frac{3}{2} = \frac{3}{4} \cdot \frac{2}{3} = \frac{3 \cdot 2}{4 \cdot 3} = \frac{6}{12}$$

reciprocal

Step 2: Simplify.





$6 = 2 \cdot 3$ $\quad$ $12 = 2 \cdot 2 \cdot 3$

$$\frac{6}{12} = \frac{2 \cdot 3}{2 \cdot 2 \cdot 5} = \boxed{\frac{1}{2}}$$

5) $\frac{1}{10} \div \frac{2}{5}$

6) $\frac{4}{7} \div 2$

7) $1\frac{3}{4} \div 14$